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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,246	01/14/2004	Stephen Patrick Finch	3018W	4302

7590 09/09/2005

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EXAMINER	
MITRA, RITA	

ART UNIT	PAPER NUMBER
1653	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,246	FINCH, STEPHEN PATRICK	
	Examiner	Art Unit	
	Rita Mitra	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

This application filed on January 14, 2004 is acknowledged. Claims 1-10 are under examination for the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-8 are indefinite because of the use of the term "includes." It is not clear as to what is encompassed by "includes," does it refer to in addition to the step (d) of claim 4?

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerkkonen et al (US Patent 3,951,938, April 20, 1976), and further in view of Endo et al. (US Patent 4,879,133, November 7, 1989); Fellers et al. (US Patent 3,463,770, August 29, 1969) and Kofod et al. (US Patent 5,885,819, March 23, 1999).

Kerkkonen et al. teach a process for separating gluten with a protein content of at least 80% on a dry base and in a vital and non-denatured condition from wheat flour, which comprises mixing said flour with water to form a suspension, homogenizing said suspension by passing it through a mill of the pin-mill type, further separating from the mix a main heavy portion comprising a starch and a light portion comprising a protein concentrate. Thereafter the reference discloses agglomeration of said gluten portion comprising protein concentrate by diluting with water and subjecting the diluted portion to a beating action, and separating said gluten agglomerates from the liquid portion (see abstract, Fig 1, entire col. 2-6). Thus the process of Kerkkonen is considered for the method of extracting gluten from flour (claims 1, 2, 4 and 9) of the instant application. The reference also teaches a vibrating screen to remove the gluten agglomerates from the other solids containing low-grade starch (claim 8). Kerkkonen et al. does not teach an agent breaking bond between starch and protein (as required in instant claims 1, 4 and 9), does not teach the emulsification step (as required in instant claims 3-10).

Endo et al. teach a water-insoluble modified gluten product, which is produced by kneading a mixture of wheat flour, L-ascorbic acid, cystine and water; then mechanically broken down under a high shearing force by passing through an extruder or a meat chopper so that molecules of gluten are divided into smaller sizes; then allowing the mixture to stand for a while; then fractionating the flour mixture, by repeated water washing in such a way that water insoluble modified gluten product is isolated from the water insoluble starch fraction and also from the water soluble substances existing in the sheared hydrated flour mixture. Further, the reference suggests that said modified gluten product may further be mixed with cystine and an emulsifier such as aliphatic acid esters of saccharides and the like to prepare a bread improver composition, which may be added to farinaceous flour mixture or dough (see abstract, cols. 4-9). Endo's process of producing gluten from the wheat flour is considered for the method of

extracting gluten from flour (claims 3-10) of the instant application. The reference does not teach the agglomeration step followed by a filtration by using a vibrating screen.

Fellers et al. teach a process of preparing a protein concentrate by extracting gluten and water soluble proteins from wheat flour, wherein the flour is slurried with water and an edible gluten modified agent such as corn oil. The slurry is then centrifuged to separate the slurry into a bottom phase comprising starch and a supernatant liquid phase, which contains protein component of wheat flour (see abstract, col. 1, lines 56-60, col. 2, lines 10-34, Examples 1 and 3). Thus the process of Fellers is considered for the method of extracting gluten from flour using an agent for breaking chemical bonds (claim 1, 4) of the instant application. Fellers et al. does not teach an agglomeration step followed by a filtration by using a vibrating screen and does not teach the emulsification step.

Kofod et al. teach a process of separating starch and gluten from wheat flour by using an enzyme that has xylanase activity (see abstract, col. 7, lines 44-59, col. 8, lines 33-45, Examples 5, 6 and 10). Thus the process of Kofod is considered for the method of extracting gluten from flour using an enzyme that breaks protein starch bond (claim 1, 4, 9) of the instant application. Kofod et al. does not teach an agglomeration step of Kerkkonen and does not teach the emulsification step of Endo.

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to use the emulsifier of Endo in the process of Kerrkonen because Endo's composition containing an emulsifier improves the bread making properties and also is able to render the bread-making dough highly tolerant to the mechanical workings of the bread making dough (see column 6, column 8 lines 53-64), because an emulsifier which is operable for the preparation of a composition containing a modified gluten product extracted from wheat flour, would have been expected to be operable for all gluten products, because Endo's composition containing an emulsifier (see column 6, lines 53-64) would be applicable to all compositions containing gluten, and because it would be desirable to enhance the effects of improving the bread making properties of the farinaceous bread flour so that it will maintain it's tolerance to the mechanical workings of the bread making dough.

Also it would have been obvious to a person having ordinary skill in the art at the time applicant's invention was made to have used the teachings of Fellers et al., to have used a gluten modified agent in the slurry of flour and water as in claims 1 and 4 of instant application

and combine the teaching of Fellers et al. which suggests that the gluten modifying agent exerts the important effect of modifying the wheat protein (gluten) that its tendency to form a dough or other sticky material is markedly decreased.

One would be motivated to use the enzyme xylanase of Kofod in the process of instant application as an agent for breaking protein starch bond because Kofod suggests that xylanase may be used in modifying the viscosity of plant cell wall derived material such as wheat, and to promote processing of viscous xylan containing material as in wheat separation.

Thus, the process of extracting gluten from wheat flour of claims 1-10, from the combined cited references would have been obvious since the combined references teach extracting gluten in a manner similar to that recited in the claims. Thus, the claimed invention was within the ordinary skill in the art to make and use at the time it was made and was as a whole, *prima facie* obvious.

Conclusion

No claims are allowable.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Mitra whose telephone number is 571-272-0954. The examiner can normally be reached on M-F, 10:00am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Jon Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rita Mitra, Ph.D.
August 26, 2005

JON WEBER
SUPERVISORY PATENT EXAMINER